

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 2, 7, 8, 10, and 12-15 and ADD new claims 16-26 in accordance with the following:

1. (CURRENTLY AMENDED) A cryptographic method comprising ~~the steps of~~:
receiving physical characteristic information representing a characteristic inherent to an individual;
randomly determining a numeric key;
generating a cryptographic key from said numeric key and a predetermined primary key;
encrypting said physical characteristic information using said cryptographic key; and
generating an auxiliary code for decrypting said cryptographic key, from said encrypted physical characteristic information and said numeric key.

2. (CURRENTLY AMENDED) A decryption method comprising ~~the steps of~~:
receiving encrypted physical characteristic information and an auxiliary code;
restoring a numeric key from said received encrypted physical characteristic information
and said auxiliary codedata;
restoring cryptographic key from said numeric key and a predetermined primary key; and
decrypting said encrypted physical characteristic information by using said cryptographic key and obtaining physical characteristic information.

3. (ORIGINAL) A cryptographic equipment, comprising:
inputting means for inputting physical characteristic information representing a characteristic inherent to an individual;
numeric key generating means for randomly determining numeric key;
key generating means for generating a cryptographic key from said numeric key and a predetermined primary key;
encrypting means for encrypting said physical characteristic information using said cryptographic key; and

code generating means for generating an auxiliary code from said encrypted physical characteristic information and said numeric key.

4. (ORIGINAL) A decryption equipment comprising:
receiving means for receiving an encrypted physical characteristic information and an auxiliary code;
numeric key restoring means for restoring a numeric key from said encrypted physical characteristic information and said auxiliary code;
key generating means for generating a cryptographic key from said numeric key and a predetermined primary key; and
decrypting means for decrypting said encrypted physical characteristic information by using said cryptographic key.

5. (ORIGINAL) A storage media for storing a program to be executed by a computer, comprising:
a inputting procedure for inputting physical characteristic information representing a characteristic inherent to an individual;
a numeric key generating procedure for randomly determining a numeric key;
a key generating procedure for generating a cryptographic key from said numeric key and a predetermined primary key;
an encrypting procedure for encrypting said physical characteristic information using said cryptographic key; and
a code generating procedure for generating an auxiliary code from said encrypted physical characteristic information and said numeric key.

6. (ORIGINAL) A storage media for storing a program to be executed by a computer, comprising:
a receiving procedure for receiving a cryptogram including an encrypted physical characteristic information and an auxiliary code;
a numeric key restoring procedure for restoring a numeric key from said encrypted physical characteristic information and said auxiliary code;
a key generating procedure for generating a cryptographic key from said numeric key and a predetermined primary key; and
a decrypting procedure for decrypting said encrypted physical characteristic information

by using said cryptographic key.

7. (CURRENTLY AMENDED) ~~An~~ A cryptographic method comprising ~~the steps of~~:
receiving physical characteristic information representing a characteristic inherent to an individual;
(arithmetically converting each component of said physical characteristic information by using a predetermined function concerning said each component and a plurality of components having a predetermined relationship with said each component,) to scramble said physical characteristic information; and
encrypting the scrambled physical characteristic information by using the predetermined cryptographic key.

8. (CURRENTLY AMENDED) A decryption method comprising ~~the steps of~~:
receiving a cryptogram which is an encryption of scrambled physical characteristic information;
decrypting said cryptogram by using the predetermined cryptographic key and obtaining said scrambled physical characteristic information; and
a1 descrambling said scrambled physical characteristic information by removing each element from each component constructing the result of decryption, in which each element is effected at the time of scrambling, by a plurality of components that has a predetermined relationship with said each component.

9. (ORIGINAL) A cryptographic equipment comprising:
inputting means for inputting physical characteristic information representing a characteristic inherent to an individual;
scrambling means for arithmetically converting each component of said physical characteristic information by using a predetermined function concerning said each component and a plurality of components having a predetermined relationship with said each component, to scramble said physical characteristic information; and
encrypting means for encrypting the scrambled physical characteristic information by using the predetermined cryptographic key.

10. (CURRENTLY AMENDED) A decryption equipment comprising:
decrypting means for decrypting a received cryptogram which is an encryption of a

scrambled physical characteristic information, by a predetermined cryptographic key and obtaining said scrambled physical characteristic information; and

descrambling means for descrambling said scrambled physical characteristic information.

11. (ORIGINAL) A storage media for storing a program to be executed by a computer, comprising:

a inputting procedure for inputting physical characteristic information representing a characteristic inherent to an individual;

a scrambling procedure for arithmetically converting each component of said physical characteristic information by using a predetermined function concerning said each component and a plurality of components having a predetermined relationship with said each component, to scramble said physical characteristic information; and

an encrypting procedure for encrypting the scrambled physical characteristic information by using the predetermined cryptographic key.

12. (CURRENTLY AMENDED) A storage media for storing a program to be executed by a computer, comprising:

a decrypting procedure for decrypting a received cryptogram which is an encryption of a scrambled physical characteristic information, by a predetermined cryptographic key and obtaining said scrambled physical characteristic information; and

a descrambling procedure for descrambling said scrambled physical characteristic information.

13. (CURRENTLY AMENDED) A remote identification system, comprising: ~~comprises~~
a client-side equipment and ~~server-side equipment, wherein:~~
~~said client-side equipment~~ comprising

inputting means for inputting physical characteristic information representing a characteristic inherent to an individual;

proof information inputting means for inputting information including identifier or identifying ~~an~~ the individual and a password;

encrypting means for encrypting said physical characteristic information using said password as a cryptographic key and outputting a cryptogram; and

outputting means for outputting authenticating information generated from said

cryptogram and said identifier; and

~~said a~~ server-side equipment comprising

registering means for registering said password and reference data, which is obtained by measuring a physical characteristic corresponding to each individual, relating to a given identifier corresponding to each ~~person~~individual;

receiving means for receiving authenticating information ~~consisting~~
~~of~~comprising said cryptogram and said identifier;

retrieving means for retrieving a relating password and reference data from said registering means in accordance to said received identifier;

decrypting means for decrypting said received cryptogram by using the password retrieved by said retrieving means as a cryptographic key and obtaining a physical characteristic information; and

examining means for examining whether or not said physical characteristic information and said retrieved reference data are equivalent.

14. (CURRENTLY AMENDED) A data sending equipment, comprising:

inputting means for inputting physical characteristic information representing a characteristic inherent to each individual;

proof information inputting means for inputting information including identifier or identifying an individual and a password;

encrypting means for encrypting said physical characteristic information using said password as a cryptographic key and outputting a cryptogram; and

outputting means for outputting authenticating information generated from said cryptogram and said identifier.

15. (CURRENTLY AMENDED) A ~~An~~ identifying equipment, comprising:

registering means for registering password and reference data, which is obtained by measuring a physical characteristic corresponding to each individual, relating to given identifier corresponding to each person;

receiving means for receiving authenticating information ~~consisting of~~ comprising said cryptogram and said identifier;

retrieving means for retrieving a relating password and reference data from said registering means in accordance to said received identifier;

decrypting means for decrypting said received cryptogram by using the password

retrieved by said retrieving means as a cryptographic key and obtaining a physical characteristic information; and

examining means for examining whether or not said physical characteristic information and retrieved reference data are equivalent.

16. (NEW) A cryptographic equipment, comprising:

an input unit to input physical characteristic information representing a characteristic inherent to an individual;

a numeric key generating unit to randomly determine numeric key;

a key generating unit to generate a cryptographic key from said numeric key and a predetermined primary key;

a encrypting unit to encrypt said physical characteristic information using said cryptographic key; and

a code generating unit to generate an auxiliary code from said encrypted physical characteristic information and said numeric key.

17. (NEW) A decryption equipment, comprising:

a receiving unit to receive an encrypted physical characteristic information and an auxiliary code;

a numeric key restoring unit to restore a numeric key from said encrypted physical characteristic information and said auxiliary code;

a key generating unit to generate a cryptographic key from said numeric key and a predetermined primary key; and

a decrypting unit to decrypt said encrypted physical characteristic information by using said cryptographic key.

18. (NEW) A storage media to store a program to be executed by a computer, comprising:

a inputting procedure to input physical characteristic information representing a characteristic inherent to an individual;

a numeric key generating procedure to randomly determine a numeric key;

a key generating procedure to generate a cryptographic key from said numeric key and a predetermined primary key;

an encrypting procedure to encrypt said physical characteristic information using said

cryptographic key; and

a code generating procedure to generate an auxiliary code from said encrypted physical characteristic information and said numeric key.

19. (NEW) A storage media to store a program to be executed by a computer, comprising:

a receiving procedure to receive a cryptogram including an encrypted physical characteristic information and an auxiliary code;

a numeric key restoring procedure to restore a numeric key from said encrypted physical characteristic information and said auxiliary code;

a key generating procedure to generate a cryptographic key from said numeric key and a predetermined primary key; and

a decrypting procedure to decrypt said encrypted physical characteristic information by using said cryptographic key.

a1 20. (NEW) A cryptographic equipment, comprising:
an inputting unit to input physical characteristic information representing a characteristic inherent to an individual;

a scrambling unit to arithmetically convert each component of said physical characteristic information by using a predetermined function concerning said each component and a plurality of components having a predetermined relationship with said each component, to scramble said physical characteristic information; and

an encrypting unit to encrypt the scrambled physical characteristic information by using the predetermined cryptographic key.

21. (NEW) A decryption equipment, comprising:
a decrypting unit to decrypt a received cryptogram which is an encryption of a scrambled physical characteristic information, by a predetermined cryptographic key and to obtain said scrambled physical characteristic information; and

a descrambling unit to descramble said scrambled physical characteristic information.

22. (NEW) A storage media to store a program to be executed by a computer, comprising:

a inputting procedure to input physical characteristic information representing a

characteristic inherent to an individual;

a scrambling procedure to arithmetically convert each component of said physical characteristic information by using a predetermined function concerning said each component and a plurality of components having a predetermined relationship with said each component, to scramble said physical characteristic information; and

an encrypting procedure to encrypt the scrambled physical characteristic information by using the predetermined cryptographic key.

23. (NEW) A storage media to store a program to be executed by a computer, comprising:

a decrypting procedure to decrypt a received cryptogram which is an encryption of a scrambled physical characteristic information, by a predetermined cryptographic key and to obtain said scrambled physical characteristic information; and

a descrambling procedure to descramble said scrambled physical characteristic information.

24. (NEW) A remote identification system, comprising:

a client-side equipment comprising

an inputting unit to input physical characteristic information representing a characteristic inherent to an individual,

a proof information inputting unit to input information including identifier or identifying the individual and a password,

an encrypting unit to encrypt said physical characteristic information using said password as a cryptographic key and outputting a cryptogram, and

an outputting unit to output authenticating information generated from said cryptogram and said identifier; and

a server-side equipment comprising

a registering unit to register said password and reference data, which is obtained by measuring a physical characteristic corresponding to each individual, relating to a given identifier corresponding to each individual,

a receiving unit to receive authenticating information comprising said cryptogram and said identifier,

a retrieving unit to retrieve a relating password and reference data from said registering unit in accordance to said received identifier,

a decrypting unit to decrypt said received cryptogram by using the password retrieved by said retrieving unit as a cryptographic key and obtaining a physical characteristic information, and

an examining unit to examine whether or not said physical characteristic information and said retrieved reference data are equivalent.

25. (NEW) A data sending equipment, comprising:

an inputting unit to input physical characteristic information representing a characteristic inherent to each individual;

a proof information inputting unit to input information including identifier or to identify an individual and a password;

an encrypting unit to encrypt said physical characteristic information using said password as a cryptographic key and outputting a cryptogram; and

an outputting unit to output authenticating information generated from said cryptogram and said identifier.

26. (NEW) An identifying equipment, comprising:

a registering unit to register password and reference data, which is obtained by measuring a physical characteristic corresponding to each individual, relating to given identifier corresponding to each person;

a receiving unit to receive authenticating information comprising said cryptogram and said identifier;

a retrieving unit to retrieve a relating password and reference data from said registering unit in accordance to said received identifier;

a decrypting unit to decrypt said received cryptogram by using the password retrieved by said retrieving unit as a cryptographic key and obtaining a physical characteristic information; and

an examining unit to examine whether or not said physical characteristic information and retrieved reference data are equivalent.